



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Product Summary

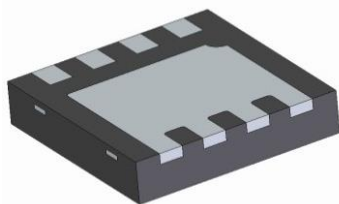
V_{RRM} (V)	I_O (A)	$V_{F(MAX)}$ (V) @ +25°C	$I_{R(MAX)}$ (mA) @ +25°C
10	6	0.48	0.3

Description and Applications

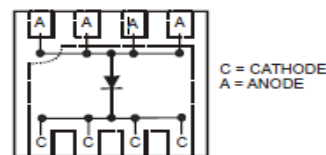
The SBRT6U10LP provides very low VF and excellent reverse leakage stability at high temperatures. It is ideal for use as bypass diode and rectifier, freewheel diode or blocking diode in applications such as:

- Solar Panels
- Blocking Diode
- Bypass Diode
- Boost Diode
- Recirculating Diode

U-DFN3030-8



Bottom View

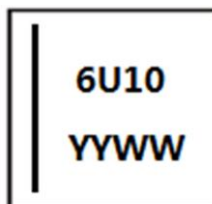
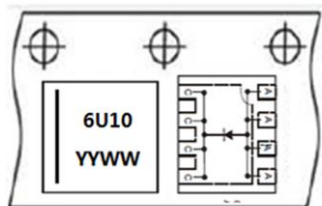

 Top View
Internal Schematic

Ordering Information (Note 4)

Part Number	Case	Packaging
SBRT6U10LP-7	U-DFN3030-8	3,000/Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
 2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information



6U10 = Product Type Marking Code
 YYWW = Date Code Marking
 YY= Last Digit of Year (ex: 14 = 2014)
 WW = Week Code (ex: 01~53)
 Bar=Cathode

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	10	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
Average Rectified Output Current	I _O	6	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	55	A

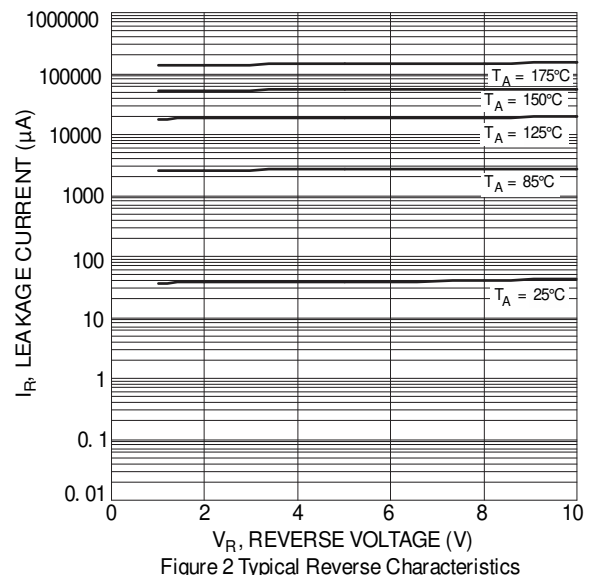
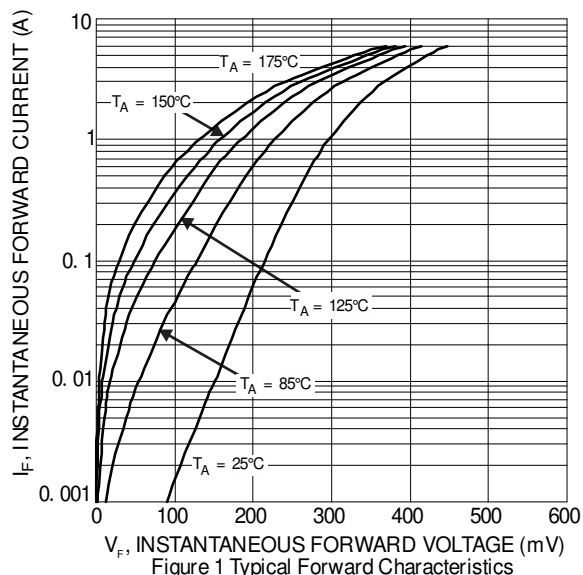
Thermal Characteristics

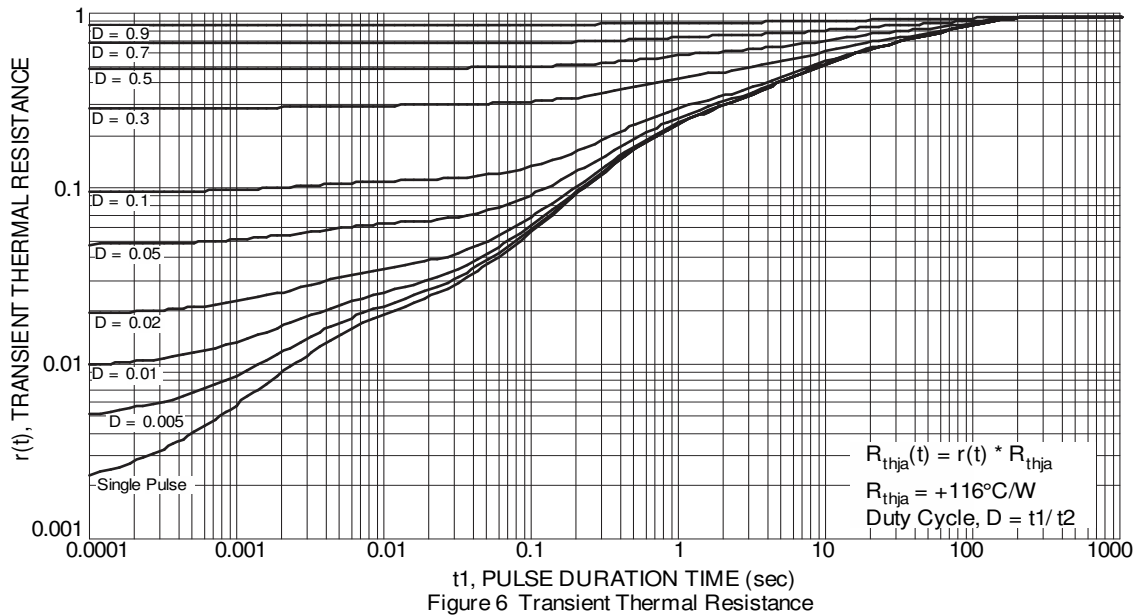
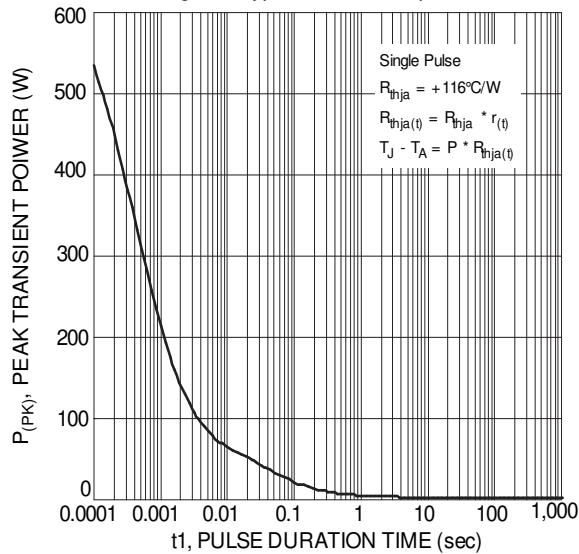
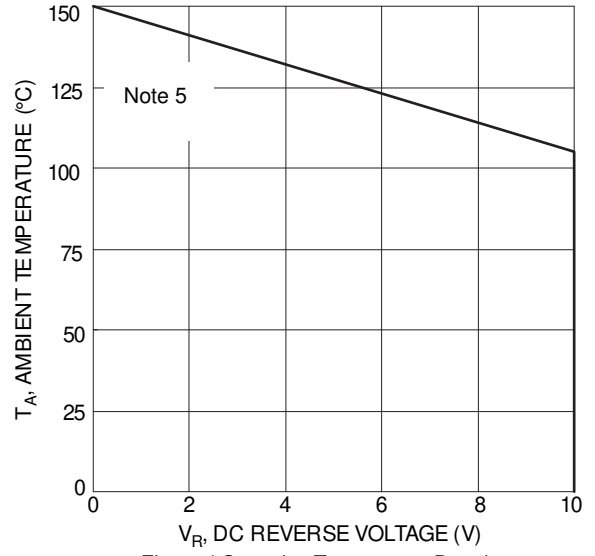
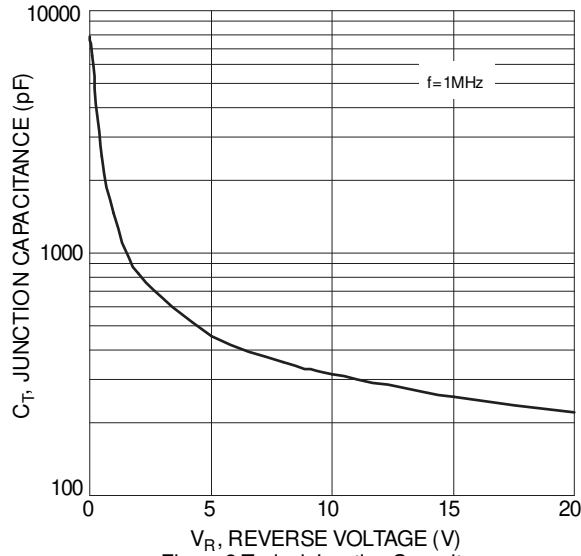
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 5)	R _{θJC}	5.5	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	R _{θJA}	65	°C/W
Operating Temperature Range VR ≤ 80% VRRM VR ≤ 50% VRRM DC Forward Mode (Note 7)	T _J	-55 to +150 ≤ 175 ≤ +200	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop (Note 6)	V _F	—	—	0.48	V	I _F = 6A, T _J = +25°C
Leakage Current (Note 6)	I _R	—	—	300	μA	V _R = 10V, T _J = +25°C
		—	25	—	mA	V _R = 10V, T _J = +125°C

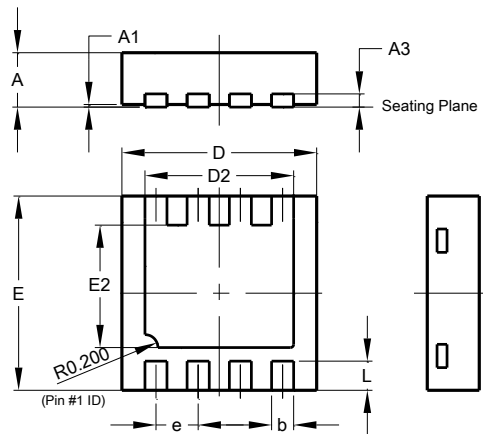
Notes:
 5. Device mounted on FR-4 PCB pad layout 1-inch 2oz copper pad.
 6. Short duration pulse test used to minimize self-heating effect.
 7. Max junction temperature guaranteed for two hours.





Package Outline Dimensions

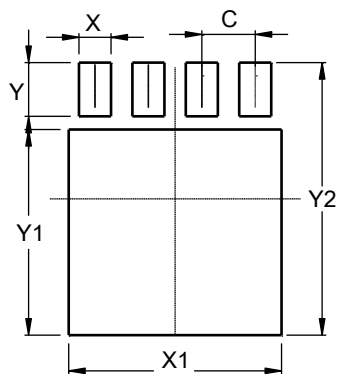
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



U-DFN3030-8			
Dim	Min	Max	Typ
A	0.57	0.63	0.60
A1	0	0.05	0.02
A3	—	—	0.15
b	0.29	0.39	0.34
D	2.90	3.10	3.00
D2	2.19	2.39	2.29
e	—	—	0.65
E	2.90	3.10	3.00
E2	1.64	1.84	1.74
L	0.30	0.60	0.45
All Dimensions in mm			

Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
C	0.650
X	0.390
X1	2.590
Y	0.650
Y1	2.490
Y3	3.300

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